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GOVERNMENT OF INDIA
TARIFF COMMISSION

REPORT

ON THE

FAIR RETENTION PRICES (EX-WORKS)

OF

PIG IRON & STEEL

PRODUCED BY

THE MYSORE IRON AND STEEL WORKS, BHADRAVATI

BOMBAY
1956

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GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY .

New Delhi, the 16th July. 1956

RESOLUTION

No. IS(A)-2(161)/56.—In their letter No. SC(A)-2(103)/53 dated 21st December 1953 Government of India in the Ministry of Commerce and Industry requested the Tariff Commission to enquire into and recommend the retention price of steel payable to Mysore Iron and Steel Works from 1st April 1954. The Commission was also requested to recommend retention prices payable for the different grades of Pig Iron produced by the Works from 14th November, 1953 *i.e.*, the date on which Mysore Pig Iron was brought into the distribution pool. The Tariff Commission having completed their enquiry has now submitted its report. The main conclusion and recommendations of the Tariff Commission are:—

(i) The estimated annual production of steel and pig iron is about 27,720 tons and 79,000 tons respectively.

(ii) The fair ex-works retention price payable for mild steel sections is Rs. 392/- per ton in 1954-55 and Rs. 405/- per ton from 1955-56 to 1959-60.

(iii) The fair retention prices payable for pig iron of standard foundry grade are Rs. 178·5 per ton from 14th November, 1953 to 31st March, 1954, Rs. 197·0 per ton in 1954-55 and Rs. 195·0 per ton from 1955-56 to 1959-60.

(iv) Railway Board should be asked to re-examine the possibilities of allowing the works to use 'all rail route' for the transport of coal and if the Railway Board agree, the retention price recommended should be suitably adjusted.

(v) Mysore Government should examine whether they could reduce the price charged on manganese ore supplied to the works.

(vi) Mysore Government should examine the possibility of supplying electric power at a special rate to the works in order to help the works to bring down their costs nearer to the level of other producers.

(vii) The works should take steps to obtain refractories at a lower cost and also examine the possibilities of a further reduction in the consumption of refractories.

(viii) The works should maintain separate balance sheets for their different activities and Government should prevail on them to submit the balance sheet for steel for the year 1955-56 before 30th June, 1956.

139 C.P.

(ix) A return of 7 per cent. on block should be allowed and the entire surplus left over payment of interest, should be credited to the Reserve Fund.

2. The Government of India have accepted the main recommendations of the Tariff Commission and have decided to fix ex-works retention prices of steel and pig iron payable to Mysore Iron and Steel Works as follows:

Steel

Rs. 392 per ton from 1-4-54 to 31-3-55.
Rs. 405 per ton from 1-4-55 to 31-3-59.

Foundry Grade Pig Iron

Rs. 178·5 per ton from 14-11-53 to 31-3-54.
Rs. 197 per ton from 1-4-54 to 31-3-55.
Rs. 195 per ton from 11-4-55 to 31-3-59.

3. Certain schemes for the expansion of the Works are under consideration and if these are completed by then, production in 1959-60 would be higher and costs might be materially different. It has therefore been decided to apply the prices indicated above for the present upto 31st March, 1959 only. Thereafter, in the light of the circumstances then prevailing, the prices may either be continued or the matter may, if necessary, be referred to the Commission again.

4. The attention of the Mysore Government is drawn to recommendations (v) (vi) (vii) and (viii) referred to in paragraph 1 above and the Government of India trust that the State Government will give their urgent cosideration to them with a view to implement them. Recommendation (iv) will be further examined in consultation with the Railway Board.

ORDER

Order that a copy of this Resolution be communicated to all concerned and that it be published in the Gazette of India, Extraordinary Part I, Section 1, dated the 16th July 1956.

N. SUBRAHMANYAM, *Joint Secy.*

PERSONNEL OF THE COMMISSION

Shri K. R. Damle, I.C.S.	Chairman
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Shri C. Ramasubban	Member
Dr. S. K. Muranjan, D.Sc. (London)	Member

PANEL FOR THE INQUIRY

Shri K. R. Damle

Dr. S. K. Muranjan

SECRETARY

Shri S. K. Bose, M.A., I.A.S.

139 C.P.

CONTENTS

REPORT ON THE FAIR RETENTION PRICES (EX-WORKS) OF PIG IRON AND STEEL PRODUCED BY THE MYSORE IRON & STEEL WORKS, BHADRAVATI

Previous inquiry.—The question of fixing a fair retention price for the steel produced by the Mysore Iron & Steel Works was first examined by the Tariff Board in 1949. On its recommendation, Government of India in the Ministry of Commerce by their Resolution No. 10-T(4)/49, dated 22nd September, 1949 fixed the retention price to the Mysore Works at Rs. 331 per ton upto 1st May, 1951. On a representation received from the Works in July, 1951 Government requested the Tariff Commission to review that price to determine whether there were any special circumstances beyond the control of Mysore Works in the years 1950 and 1951, which necessitated a revision of the retention price for those two years and if a revision was found necessary to recommend fair retention price for that period as well as for the future. The Commission recommended the revision of ex-works retention prices as follows:—

From	To	Price Rs. per ton
(i) 1-4-1950	31-3-1951	308
(ii) 1-4-1951	30-9-1951	329
(iii) 1-10-1951	31-3-1954	384

Government of India in the Ministry of Commerce and Industry by their Resolution No. SC(A)-2(87)/52, dated 1st July, 1952 accepted the above recommendations and the prices were fixed for the Mysore Works accordingly.

2.1. **Terms of reference.**—The Commission did not recommend the price beyond 31st March, 1954, because it was expected that by that time the new electric furnaces then under erection, would go into production, which would materially influence the cost of production of steel at the Works. The Ministry of Commerce and Industry in their letter No. SC(A)-2(103)/53, dated 21st December, 1953, pointed out that one of the electric furnaces had gone into production and the other one was likely to go into production shortly, and requested the Commission to enquire into the retention prices of steel payable to the Works from 1st April, 1954 and forward their recommendations to Government as soon as possible.

2.2. Government further pointed out in their above letter that pig iron produced by the Mysore Works had been outside the distribution control over pig iron operated by Government on account of the small quantities and special variety (*i.e.*, charcoal variety) produced by the Works. As the Works started producing substantial quantities of pig iron (foundry grade) subsequently it was decided to include this production also in the distribution pool. The Works, however, claimed that their cost of production of pig iron was higher than that of the other producers. It was, therefore, decided to equalise their prices by suitably increasing the selling prices of pig

iron and by re-imbursing to them the excess of their retention prices over the selling prices from the Equalisation Fund, into which the other producers would credit the excess of the selling prices over their retention prices as already fixed. Accordingly the selling price of foundry pig iron, Grade I was increased by Rs. 20 per ton from 14th November, 1953 and the retention price to Mysore Works was fixed at Rs. 161 per ton, pending investigation by the Tariff Commission. This price would not, however, apply to the pure charcoal pig iron which would be outside the distribution control. The Commission was accordingly requested to inquire along with its investigation into the steel prices into the retention prices of the different grades of foundry iron produced by the Mysore Works and to recommend fair retention prices for different grades of pig iron. The present investigation, therefore, covers (1) the fixation of a fair retention price for steel produced by the Mysore Works from 1st April, 1954 and (2) fair retention prices for different grades of foundry iron produced by the Mysore Works from 14th November, 1953.

3. **Method of inquiry.**—The Commission took up this case in December, 1954. On 15th December, 1954, the Commission asked the Mysore Works to submit their costs for the periods 1952-53, 1953-54 and April-December, 1954, and their estimates for the future. The Works submitted their costs for 1952-53 and 1953-54 on 9th March, 1955 and the costs for April-December, 1954 and for the future on 30th March, 1955. Shri P. M. Menon, Assistant Cost Accounts Officer visited the Works on 10th August, 1955 and examined the accounts of the Company. Later, Shri N. Krishnan, the Senior Cost Accounts Officer discussed with Shri C. R. Natesan, the Iron and Steel Controller, Shri R. N. Dutt, the Deputy Iron and Steel Controller and the representatives of the Works, the basis on which estimates of future cost should be prepared. Shri K. R. Damle, I.C.S., Chairman and Dr. S. K. Muranjan, Member, visited the Works on 28th December, 1955. On 4th January, 1956 the Commission met the representatives of the Company at the Commission's office in Bombay and discussed with them their estimates of cost and other points relevant to the question of the fixation of fair retention prices for steel and foundry grade iron produced by the Works.

4. **Implementation of the ancillary recommendations made by the Commission in 1952.**—The extent to which the Works have implemented the ancillary recommendations made by the Commission in the previous inquiry is discussed below:—

(i) "Arrangements should be made for an independent technical examination of the expansion projects of the Works and in connection with such investigation, the question of administrative reorganization of the Works should also be examined". We have been informed by the Works that Ramsayer & Miller Co., U.S.A., examined the expansion scheme and their report is now under the consideration of Government.

(ii) "The Works should make suitable accounting arrangements to even out the abnormal expenditure incurred in certain periods when heavy repairs have to be carried out". The Works have opened a fund account called

"Special Repairs and Renewal Fund" for the purpose. Only items of special repairs and supplies causing heavy fluctuation under "Repairs and Maintenance", the value of which exceeds Rs. 2,500 will be debited to this Fund. The fund has, at present Rs. 75,000 to its credit. The Works have stated that the adequacy of the provisions will be reviewed at the end of five years.

(iii) "The Works should investigate the possibility of effecting further economies in the consumption of refractorics" The Works have stated that they are handicapped because of their small-size which denies them the advantages of a large-scale producer. They, however, claim that best possible efforts are being made to secure economy in the consumption of refractories.

(iv) "Every effort should be made to supply coal to the Works by the all-rail route, and the Works should be given the necessary transport facilities for building up a reserve stock of coal equal to two months' requirements". The all-rail route has not come into existence.

(v) "Adequate transport facilities should be provided for scrap and refractories". The Iron and Steel Controller is giving the Works special help in the matter of procurement of wagons for scrap and refractories.

(vi) "The Works should take immediate steps to maintain separate accounts for each individual section, particularly for the iron and steel section and such accounts should cover not merely the works costs, but also the overheads. The whole system of accounts should be placed on a commercial basis without delay". We regret to note that this has not been implemented. The Works have stated that it was not understood whether it was the desire of the Commission to prepare separate accounts with separate balance sheet for each section. And they have repeated that "the Mysore Iron and Steel Works is a composite Works having different manufacturing units. There are a number of difficulties in the preparation of a separate balance sheet for each unit, since the service departments are common and there are common stocks of stores and raw materials. Further there is only a single account in the Government Treasury and the book debits as well as advances are also common".

(vii) "The Works should examine the possibility of reducing the proportion of non-standard and defective products in their total output". The Works have pointed out that the average weight per foot run of steel sections rolled is an important factor in this. They have stated that attempts are being made to reduce the percentage of defectives and cuttings.

(viii) "As the existing provision for depreciation is inadequate for carrying out the necessary replacements and renewals to maintain the plant at the optimum level of efficiency, depreciation at 7·81 per cent. on the gross block

as against 6·25 per cent. allowed at the last inquiry has been recommended. The Works should set aside Rs. 7·81 lakhs per annum for depreciation against that part of the total block which is used for steel making". The Works have stated that the required amount has been set aside towards depreciation.

(ix) "The Works have no reserves, surplus earned during the last few years (after providing for depreciation) having been barely sufficient to wipe off the losses made in earlier years. A return of 7 per cent. on the gross block, instead of 5 per cent. allowed at the previous inquiry has been recommended. The entire surplus left over after payment of interest on the fixed capital should be credited to the Reserve Fund." A sum of Rs. 19·21 lakhs has been credited to the Reserve Fund and a further sum of Rs. 5,00,387 is to be added this year.

5.1. **Changes in the Works.**—As pointed out in the previous reports, the position of the Mysore Works is different as compared with the two other producers, Tata Iron & Steel Co. and Indian Iron & Steel Co. Its special features particularly with reference to location, ownership and management are described in detail in those reports and it is not necessary to reproduce them here. The Commission in its 1952 report had drawn attention to the expansion plans of the Works and felt that the proposed expansion and diversification of the Works' activities were likely to yield a reduction in overheads and a more effective utilisation of the transport and other services maintained by the Works for the common use of the various departments. The Works have not yet made any progress in regard to the expansion of its steel plant. Two electric pig iron furnaces which were under construction at the time of the last inquiry have been commissioned. One of them has been in regular production since April, 1953 and the other went into operation in November, 1955. Setting up of a third furnace has been deferred for want of power. The bi-cable ropeway planned with a view to ensure movement of adequate ore supplies for expansion schemes has been put into operation. Improvements to mines tramways, workshop, foundry and yards have progressed to some extent.

5.2. **Expansion programme.**—The Works have informed us that the Planning Commission have allocated the following special development projects to the Mysore Works in the Second Five Year Plan:—

	Estimated Cost Rs. in crores
(1) Stainless Steel (15,000 tons)	4·5
(2) Ferro-Alloys (20,000 tons)	1·5
(3) Alloy & Tool Steel (2,000 tons)	1·1
(4) Expansion in Steel Production capacity (100,000 tons)	3·0
(5) Spun Pipe Plant (Bals. out of Rs. 49 lakhs) (17,000 tons)	0·15
(6) Sintering Plant (Bals. out of Rs. 42 lakhs) (85,000 tons)	0·30
(7) Corresponding extensions of Foundries, Tramway and Electric Supply.	1·0
TOTAL	11.55

On account of certain inherent features of the plant prospects of substantial economies from expansion of steel capacity by itself are limited. In regard to specialised steels which offer a promising development, it need hardly be pointed out that these presuppose technical and management direction of a high order.

6.1. **Production.**—The following statement gives the Commission's estimate of production in 1952 with the actuals for 1953-54, 1954-55 and our estimates for 1955-56 and 1956-57 to 1959-60:—

	Commission's Estimate in 1952	1953-54	1954-55	Future 1955-56	Estimates 1956-57/ 1959-60
1	2	3	4	5	6
	Tons	Tons	Tons	Tons	Tons
Blast Furnace :					
Basic Grade	10,000	6,405	2,016	..	
Foundry Grades :					
Coke Charcoal	14,000	14,083	18,650	20,000	20,000
Pure Charcoal	..	4,754	3,468	4,000	4,000
TOTAL (A)	24,000	25,242	24,134	24,000	24,000
Electric Pig Iron Furnace (I) :					
Basic Grade	..	15,975	11,047	18,000	18,000
Foundry Grades :					
Coke Charcoal	..	11,284	15,124	10,000	10,000
TOTAL (B)	..	27,259	26,171	28,000	28,000
Electric Pig Iron Furnace (II) :					
Foundry Grades :					
Coke Charcoal (c)	..	..	..	..	27,000
TOTAL (A) + (B) + (C)	24,000	52,501	50,305	52,000	79,000
Open Hearth Furnace :					
Mild Steel	28,500	28,108	28,818	29,000	29,000
High Carbon Steel	..	147	108	..	..
TOTAL	28,500	28,255	28,926	29,000	29,000
Electric Steel Furnace :					
Mild Steel Ingots	4,500	4,927	3,922	4,000	4,000
Mild Steel Hot Metal	1,500	935	1,148	2,000	2,000
TOTAL	6,000	5,862	5,070	6,000	6,000
Rolling Mill :					
Mild Steel Sections	27,740	26,213	25,002	27,720	27,720
Mild Steel Billets	..	771	1,664	..	..
High Carbon Steel Sections	..	34	153	..	..
High Carbon Billets		20	52	..	..
TOTAL	27,740	27,038	26,871	27,720	27,720

6.2. It will be seen from the above statement that the Works have been able to maintain the production at the blast furnace and open hearth according to the estimates of the Commission. The production in the electric steel furnace was slightly lower than what was estimated by the Commission. The lower production in the rolling mill was due to their rolling ligher sections as well as variation in the product mix. A point to be observed about our estimates for the future is that the entire capacity of the blast furnace has been allocated for the production of foundry iron and basic grade iron is planned for the electric furnaces.

7.1. **Works Cost of Pig Iron.**—The following statement gives the Works costs of basic and foundry grades of pig iron produced in the blast furnace and electric furnace separately:—

(Rupees per ton).

Item	Blast Furnace				Electric Pig Iron Furnace			
	1952 estimates	1953-54	1954-55	Future estimates	1952 estimates	1953-54	1954-55	Future estimates
1	2	3	4	5	6	7	8	9
(a) Basic Grades								
Materials	22·03	18·88	21·66	..	..	19·88	23·07	24·64
Fuel	74·48	77·42	80·35	..	..	76·82	76·75	75·76
Other Operating Cost	21·85	22·22	23·46	..	..	25·96	26·31	28·76
TOTAL	118·36	118·52	125·47	..	..	122·66	126·13	129·16
(b) Foundry Grades (Coke-charcoal)								
Materials	22·55	19·36	22·21	23·50	..	20·54	23·98	25·66
Fuel	87·57	89·76	93·16	92·03	..	82·33	82·16	79·97
Other Operating Cost	25·58	26·67	28·14	29·04	..	31·16	31·56	34·46
TOTAL	135·70	135·79	143·51	144·57	..	134·03	137·70	140·09

7.2. In the above statement cost has been split up into three factors, *i.e.*, material, fuel and other operating cost. The fuel cost includes coke, charcoal, steam electricity and electrode paste. After 1953-54. there has been an increase in the works cost and in our estimates for the future that has been taken into account. We may, examine the main reasons for the increase in the works cost.

7.2.1. **Material Cost.**—The increase in the material cost is primarily due to the increases in the cost of iron ore, and manganese ore. The cost of iron ore, that we have adopted for our estimate from 1955-56 is Rs. 11·31 per ton as against Rs. 10·51 per ton in 1954-55 and Rs. 9·85 per ton in 1953-54. This increase is due to the general increase in the mining and transporting charges. The mining contractors' rate has increased by 20 per cent. on the basic rates. In the case of manganese ore the rate payable to the Geological Department of the Mysore Government has been enhanced by Rs. 10 per ton. By this increase the cost of manganese ore at Bhadravati has gone up to Rs. 40·62 per ton as against Rs. 22·95 per ton at Kulti Works of the Indian Iron and Steel Company. The Mysore Government should examine whether they could reduce the price charged on manganese ore on the supplies made to the Iron and Steel Works so as to reduce the disparity in cost of manganese ore between the Mysore Works and the other Steel Works. We have also allowed an increase of Re. 1 in the case of limestone due to the increase in the contractors' rate, provision for mines amenities and transport charges.

7.2.2. **Fuel.**—Items which require comment under this head are charcoal, coal and electricity.

7.2.3. **Charcoal.**—Till 1953, the Works were obtaining charcoal from Bhadravati. Since then, due to shortages at Bhadravati, they have been obtaining charcoal from Mysore also. The cost of charcoal obtained from Mysore was Rs. 104·57 per ton in 1954/55, while the cost of Bhadravati charcoal was only Rs. 80 per ton. As the Works will not be able to meet their full requirements of charcoal from Bhadravati it will have to meet part of their requirements from Mysore which increases its cost of charcoal. Another contributing factor for the increase in the cost of charcoal is the increased rate of seigniorage payable to Mysore Government.

7.2.4. **Coal.**—The controlled price of all grades of coal has been increased by As. 3 per ton with effect from 18th July, 1955. From 15th October, 1955, coastal shipping rates from Calcutta to Madras were increased by 5 per cent. over the previous rate of Rs. 27 per ton. The Works have also to contribute to the Coal Miners' Provident Fund Scheme at As. 3 per ton. With these increases, the cost has gone up to Rs. 88·29 per ton from Rs. 84·79 per ton in 1954-55. As was pointed out in the Commission's last report, one of the important reasons for the high cost of coal is transport cost. We have been advised that if the Works were allowed to transport coal by all-rail route instead of by rail-*cum*-sea route as at present, the cost of coal could be reduced by about Rs. 45 per ton. As this could bring substantial reduction in the cost of steel, we recommend that the Railway Board should be asked to re-examine the possibilities of allowing the Works to use the all rail-route for the transport of coal. If the Railway Board agree to this suggestion, suitable adjustment should be made in the retention prices.

7.2.5. **Electricity Charges.**—It was expected that the over-all cost of production of pig iron by electric smelting would be substantially lower than by coke or charcoal. This expectation has not materialised, as the surcharge on electric power was increased by 10 per cent. in 1953-54 and by another 10 per cent. in 1954-55. The incidence of this 20 per cent. increase is about Rs. 7 per ton of pig iron. We have not gone into the cost of generating power in Mysore and we cannot say how far these increases are justified. From the view point of the iron and steel industry in Mysore, these increases have an adverse effect. The Mysore Iron and Steel Industry is labouring already under the severe disadvantage of great distance from coal mines and consequent expensiveness of coal supplies and use of electricity is justified, only to the extent that it remedies this serious locational disadvantage in relation to coal. We are told that concessional rates have been given to the Mysore Chemical and Fertilisers on the merits of their case. The Mysore Government should, in this case also, examine the possibility of supplying electric power at a special rate to the Iron and Steel Works, in order to help them to bring down their cost nearer the level of other producers. In this connection we have been advised that with the installation of a sintering plant with a capital outlay of about Rs. 42 lakhs, appreciable reduction in the cost of pig iron could be obtained through reduction in the consumption of fuel. The representatives of the Company were not, however, sure how much saving in cost could accrue from the installation of the sintering plant. This requires further technical examination.

7.2.6. **Other operating cost.**—The increase in the other operating cost is due to the annual increments in wages and salaries, increased cost of stores and increase in the administrative overheads. This is examined further when discussing the above material cost of mild steel sections.

8.1. **Works cost of steel.**—The following statement gives the works costs of steel ingots and mild steel sections.

Section	Estimated actual production.	Net cost of material per ton of production	Above net material cost per ton of production	Total works cost per ton of production	Remarks	
	Tons	Rs.	Rs.	Rs.		
(a) *M.S. Steel Ingots*						
Open Hearth Furnace :						
Commission's estimate .	28,500	125.84	106·18	232.02		
1953-54	28,108	115.15	102.95	218.10		
1954-55	28,818	120.19	103.50	223.69		
Future estimates . . .	29,000	123.86	109.15	233.01		
Electric Steel Furnace :						
Commission's estimate .	4,500	127.37	95.97	223.34		
1953-54	4,927	117.71	89·69	207.40		
1954-55	3,922	122.04	111.66	233.70		
Future estimates . . .	4,000	128.53	115.72	244.25		
				Sections: Billets (mainly Bars and untested category).		
(b) *Mild Steel Sections*						
Rolling Mills :						
Commission's estimate . . .	27,740	263.65	51.49	315.14	315.14	..
1953-54 . .	26,984	248.95	50.25	299.21	299.70	282.84
1954-55 . .	26,666	263.41	49.15	312.56	313.65	285.62
Future estimates .	27,720	269.42	53.18	322.60	322.60	..

8.2. **Steel melting shop.**—The yields of steel ingots from metallic charge for the years 1953/54 and 1954/55 together with 1952 estimate are given below:

	Open Hearth Furnace	Electric Furnace
1952 estimate	87.89%	89.61%
1953-54 actuals	89.58%	82.13%
1954-55 actuals	90.51%	84.42%

It will be seen that the yields at the electric furnace had been lower than those adopted in 1952. This partly explains the higher cost of ingots produced in the electric steel furnace.

Above material cost

8.3. **Administrative overheads**

8.3.1. **Annual Bonus.**—During the 1952 inquiry bonus equal to two months' wages had been included in the works cost as the Works were run as a department of the Mysore Government and the bonus was not related to profits. The Works at that time did not have anything corresponding to the various other systems of bonus obtaining in the case of other steel companies. A sum of Rs. 1,40,000 estimated to be the annual expenditure under this head for the steel plant was provided in the 1952 estimate of the works cost.

8.3.2. The Works have from 1st April, 1952 instituted a system of production and good attendance bonus embracing all their employees who are shown under production, semi-production and service departments. The production bonus varied from 12 to 20 per cent. of basic wages and salaries in the production departments while in the semi-production and service departments this was proposed at 75 and 50 per cent. respectively of the average percentage of production departments pooled together. Good attendance bonus was at 5 per cent. of the basic wages. Lately this system of bonus had been made applicable to the staff of the executive and administrative departments of the Works including those of the town department. In addition to this, a system of heat allowance for the workers employed in heat departments and night shift allowance for all the workers in the night shift have also been given effect to from August, 1953. In view of these additional inducements the annual bonus allowed in 1952 is not included in the actuals from 1953-54 and in our estimates for the future.

8.3.3. **Training of Apprentices and skilled operatives.**—Since 1954/55 the Works have embarked upon a large scheme by which apprentices were recruited for training in the various departments in the Works for supervisory posts. Selected candidates from amongst the existing employees with minimum qualification and fitness were also given training to take up responsibilities of Senior Operatives, Chargemen and Foremen. This scheme provides for foreign training also. As against a sum of Rs. 27,000 included in 1952 estimates for these an expenditure of Rs. 49,000 in 1953/54, and Rs. 1,19,000 in 1954/55 was incurred. As the benefit of this scheme will have a long term effect, a sum of Rs. 50,000 has been considered reasonable to be charged to the production during 1954/55 and in our estimates for the future while the actuals for 1953/54 were admitted in full.

8.3.4. The total expenditure under administrative overheads during the years 1953/54 and 1954/55 together with the estimate made in 1952 is given below along with the proportion allocated to the iron and steel production:—

In lakh of Rupees.

	Total expenditure	Allocated to Iron and Steel
1952 estimate	15·763	7·881
1953/54 actuals	17·615	8·808
1954/55 actuals	19·559	9·780
Future estimates	21·330	11·200

8.3.5. The increase in total expenditure was due mainly to the increase in the expenses pertaining to town department. This relates to town maintenance, anti-malaria campaign, sanitation, etc., consequent on the increase in the number of residential quarters and extension of the town area. Further, the hospital facilities were increased by addition of 35 beds over those in 1952 and the opening of a veterinary hospital in 1953. The number of staff in the Accounts, Drawing and Purchase Departments showed an increase as compared to 1952. These together with the annual increments contributed to the increase in expenditure. In our estimates for the future we have provided for the higher cost due to annual increments and administrative reorganisation.

8.4. **Refractories.**—Though the Works have claimed that steps have been taken to reduce the consumption of refractories, the expenditure incurred by the Works on the relining of furnaces as well as on repairs to lining continues to be high in comparison with that incurred by the other two producers. We, therefore, recommend that the Works should take steps to obtain refractories at a lower cost and should also examine the possibilities for further reduction in the consumption of refractories.

8.5. **Reorganisation.**—The Mysore iron and Steel Works have under consideration a scheme for the reorganisation of the various departments in the factory and the administrative departments consequent on the expansion of the Works and increase in Work in the various sections. This covers additional posts of Foremen, Assistant Foremen, Assistant Superintendents, Chargemen, etc. in the various sections of the Works and supervisory and other categories of staff in the Director's and General Manager's Offices, Town, Time Office. Accounts Department, etc. The whole scheme is expected to cost the Works Rs. 3·063 lakhs. We have allowed this amount to cover the expenditure on reorganisation.

9.1. **Overheads—Block.**—We shall first determine the block on which depreciation and return have to be allowed, before we proceed to examine the provision for overheads to be added to the estimates of works cost. The Mysore Works continue to be a composite unit producing iron and steel, cast iron pipes, baling hoops, cement, ferro-silicon and a few chemical products from pyroligneous liquor obtained through wood distillation. The combined block for all these activities as on 31st March, 1954 and 1955 was valued at Rs. 665·21 lakhs and Rs. 691·95 lakhs repectively. In 1952 the Commission's estimate

of the combined block was Rs. 325·83 lakhs, excluding the block for development projects of Rs. 237·42 lakhs. The Works in their memorandum dated 29th December, 1955, submitted to the Commission their allocation of block for the production of iron and steel as given below:

In lakhs of Rupees.

	Foundry Iron	Steel Sections
1953-54	199·15	141·53
1954-55	189·18	170·90
Future	255·22	179·49

9.1.1. The Commission discussed the above allocations with the representatives of the Company and the Works agreed that their allocations included the amount spent on development projects undertaken for the expansion of production to 100,000 tons of ingots and also for the diversification of production. In conformity with the principle followed in similar cases, we have only allowed the block actually required to maintain the production estimated by us. On this basis, our estimate of block is given below:

In lakhs of Rupees.

	Foundry Iron	Steel Section
1953-54	101	114
1954-55	101	126
Future	160	128

9.1.2. The block for steel adopted by the Commission in 1952 was Rs. 100 lakhs. The increase in our estimates is mainly due to the fact that they are expected to use their own iron for steel making in future which necessitates larger allocation of the block employed in the blast furnace and its auxiliaries, to steel.

9.2. **Depreciation.**—In 1952, the Commission allowed depreciation at the rate of 7·81 per cent. on Rs. 100 lakhs, the estimated block for steel. This included 1·56 per cent. special depreciation. For the reasons given in the Commission's last report, we are allowing the special depreciation to continue on the old block and we have allowed the normal rate of 6¼ per cent. on the new block.

9.3. **Interest on working capital.**—As in 1952, we have allowed 4 per cent. interest on working capital estimated at 5 months cost of production. It may be added that this is the rate at which Mysore Government have been advancing money to the Works.

9.4. **Return on block.**—We have allowed a return of 7 per cent. on the block as in 1952 and recommend that as before the entire surplus left over after payment of interest on the fixed capital should be credited to the Reserve Fund.

9.5. **Administrative charges at Government Headquarters.**—We have provided that same amount of Rs. 60,000 for steel as in 1952 and Rs. 30,000 for pig iron.

9.6. **Selling expenses.**—The same rate of Rs. 2 per ton has been allowed in the case of steel as in 1952. No provision for selling expenses has been made for pig iron as in the case of the Indian Iron and Steel Co. Ltd.

9.7. **Margin for contingencies.**—Provision has been made at the rate of Rs. 5 per ton for steel and Rs. 2 per ton for pig iron. Similar provisions have been made in the case of Tata Iron and Steel Co. and the Indian Iron and Steel Co.

9.8. **Non-standards and defectives (including cuttings).**—Adjustments in the final retention prices of saleable steel (standard products) have been made on the same lines as in 1952. We have also provided 800 tons of iron and 200 tons of steel for maintenance purposes in the Works.

9.9. The following statements show the overhead charges allowed by us for (a) foundry pig iron and (b) steel. In column 8 of statement (B) we have also given the overheads allowed in the 1952 inquiry.

STATEMENT (A)

FOUNDRY PIG IRON

Item	1953-54		1954-55		1955-56—1959-60	
	Total (lakhs of Rs.)	Rate per ton of pig iron	Total (lakhs of Rs.)	Rate per ton of pig iron	Total (lakhs of Rs.)	Rate per ton of pig iron
1	2	3	4	5	6	7
		Rs.		Rs.		Rs.
1. Depreciation :						
(a) Normal .	6·31	15·26	6·31	17·93	10·00	17·11
(b) Special provision for depreciation . .	0·91	2·20	0·83	2·36	0·91	1·56
2. Interest on working capital .	0·91	2·20	0·84	2·39	1·38	2·36
3. Return on fixed capital . .	7·07	17·10	7·07	20·08	11·20	19·16
4. Administrative charges at Government Headquarters	0·30	0·72	0·30	0·85	0·30	0·51
5. Margin for contingencies	..	..	..	..	1·17	2·00
TOTAL OVERHEADS	15·50	37·48	15·35	43·61	24·96	42·70

STATEMENT (B)

STEEL

Item	1953-54		1954-55		1955-56—1959-60		Overhead charges allowed at the last inquiry (From 1st February, 1951).	
	Total (lakhs of rupees)	Rate per ton of finished steel (standard section*)	Total (lakhs of rupees)	Rate per ton of finished steel (standard section*)	Total (lakhs of rupees).	Rate per ton of finished steel (standard section*)	Total (lakhs of Rs.)	Rate per ton of finished steel (standard section*)
1	2	3	4	5	6	7	8	9
		Rs.		Rs.		Rs.		Rs.
1. Depreciation :								
(a) Normal	7·13	26·94	7·88	29·96	8·00	29·40	6·25	22·84
(b) Special provision for depreciation	1·34	5·07	1·42	5·40	1·34	4·90	1·56	5·70
2. Interest on working capital . .	1·34	5·07	1·39	5·29	1·48	5·45	1·40	5·12
3. Return on fixed capital . .	7·98	30·18	8·82	33·55	8·96	32·92	7·00	25·57
4. Administrative charges at Government Headquarters . .	0·60	2·27	0·60	2·29	0·60	2·22	0·60	2·19
5. Selling expenses . . .	0·54	2·05	0·54	2·06	0·55	2·04	0·55	2·03
6. Margin for contingencies . .	..	..	..	..	1·39	5·12	1·40	5·12
TOTAL OVERHEADS . . .	18·93	71·58	20·65	78·55	22·32	82·05	18·76	68·57

*After making adjustments for defectives and non-standards (including cuttings) referred to in paragraph 9.8.

10.1. **Fair retention prices of steel.**—We recommend the following fair retention prices for steel. We have allowed the same rate of overheads for billets and sections, as the quantity of billets produced was small.

	1954-55		Future
			(1955-56—1959-60)
	M.S. Billets	M.S. Sections	M.S. Sections
	Rs. per ton	Rs. per ton	Rs. per ton
(1)	(2)	(3)	(4)
Works cost	296·20	313·65	322·60
Overheads	78·55	78·55	82·05
Ex-works fair retention price	374·75	392·20	404·65
Say	375	392	405

10.2. We discussed with the representatives of the Works the period for which the price should be fixed. It is agreed that it would be better to fix the price for as long a period as possible. We, therefore, recommend that the price given in Col. 4 of the statement should remain in force upto 31st March, 1960 but if, during the period of price fixation, significant variations take place in the prices of raw materials and stores, freight rates or compulsory charges under any labour welfare schemes initiated by the State, the Works may request for an examination of the matter.

10.3. Though in accordance with the terms of reference, we have to recommend the fair retention price from 1st April, 1954, we would like to point out that during the course of our examination of costs of 1953-54, it was revealed that the works cost of steel was lower by Rs. 15 per ton as compared with the Commission's estimate of Rs. 315 per ton. Even if we allow an increase in overheads on the same lines as we have recommended for the future, the Works have been able to make an extra profit of Rs. 13 per ton. On a production of 26,984 tons, the extra profits realised must be about Rs. 3·6 lakhs. As the Company could not submit its profit and loss account for steel, we are not aware as to how this profit has been appropriated. We have already pointed out the failure of the Works to implement the Commission's earlier recommendation on this subject. We recommend again that the Works should maintain separate balance sheets

for their different activities and Government should prevail on them to submit the balance sheet for steel for the year 1955-56 before 30th June, 1956.

11.1. **Fair retention prices for pig iron—Differential Prices of Pig Iron.**—The analysis of the production of pig iron maintained by the Works under the different grades from 14th November, 1953 (the date from which pig iron production at Bhadravati was brought under the distribution control) showed that the maximum production was classified under standard foundry grades II and III. The manganese analysis showed that about 60 per cent. of the total production was of High Manganese variety and the rest of Low Manganese. It was agreed, therefore, in consultation with the Iron and Steel Controller and the Works' Management that the standard grade of production of pig iron at Bhadravati should represent the average of Grades II and III of the High and Low Manganese varieties.

11.2. Applying the formula for working out the grade differentials adopted in the case of Kulti Works of the Indian Iron & Steel Co., the differential in price for each change of 0·5 per cent. silicon in the case of the Mysore Iron and Steel Works would be as follows:

	Rs. per ton.		
	1953-54	1954-55	Future
Coke cost	1·17	1·56	1·61
Conversion cost	2·77	2·88	3·11
Overheads	1·87	2·18	2·14
TOTAL	5·81	6·62	6·86
Say	6	7	7

11.3. As regards the Manganese differentials, the figure of Rs. 2 per ton established in the case of Kulti Works needed modification in the case of these Works in view of the difference in the price of manganese ore (Rs. 40·62 per ton at Bhadravati against Rs. 22·95 per ton at Kulti). The Manganese differential has therefore been estimated at Rs. 3/- per ton in the case of Mysore Iron and Steel Works.

11.4. The sulphur differential did not require any change and the existing rates of penalty of Rs. 2 per ton for off-grade iron with sulphur-content to a maximum of 0·065 per cent.; Rs. 5 per ton for off-grade iron with sulphur-content between 0·066 per cent. and 0·080 per cent.; and Rs. 10 per ton for all off-grade iron with sulphur-content above 0·080 per cent. have been maintained.

11.5. We recommend that the ex-works fair retention prices for different grades of pig iron should be fixed for different periods as given in columns (6) to (8) of the following statement. The prices from 1955-56 are subject to revision for the reasons given in paragraph 10·2.

STANDARD GRADES—HIGH MANGANESE

Grade	Analysis				Ex-works fair retention prices recommended for		
	Silicon per cent	Manganese per cent	Phosphorous per cent	Sulphur per cent	From 14-11-53 to 31-3-54	1954-55	Future (1955-56 to 1959-60)
1	2	3	4	5	6	7	8
					Rupees	per	ton.
Standard foundry . .	1. 2·75 to 3·25	1·00 to 1·50	Under 0·40	Under 0·035	178·5	197	195
	2. 2·25 to 2·75	"	"	Under 0·050	172·5	190	188
	3. 1·75 to 2·25	"	"	"	166·5	183	181
	4. 1·50 to 1·75	"	"	"	163·5	179·5	177·5
Special 4x . . .	1·25 to 1·50	"	Under 0·35	"	160·5	176	174
Special basic . .	1·00 to 1·25	"	"	"	157·5	172·5	170·5
Standard basic . .	1·00 and under	"	"	"	154·5	169	167
LOW MANGANESE GRADES							
Low Manganese foundry	1. 2·75 to 3·25	0·50 to 1·00	Under 0·40	Under 0·035	175·5	194	192
	2. 2·25 to 2·75	"	"	Under 0·050	169·5	187	185
	3. 1·75 to 2·25	"	"	"	163·5	180	178
	4. 1·50 to 1·75	"	"	"	160·5	176·5	174·5
Special 4x . . .	1·25 to 1·50	"	Under 0·35	"	157·5	173	171
Low Manganese basic special . . .	1·00 to 1·25	"	"	"	154·5	169·5	167·5
Low Manganese basic .	1·00 and under.	"	"	"	151·5	166	164

12. **Representation by the Foundry Association.**—The Indian Foundry Association, Calcutta, represented to the Commission that the present price of pig iron is uneconomical to the foundries and pleaded for a reduction in the prices of foundry grade iron and also suggested that the prices of off-grade pig iron should be fixed at Rs. 40 to Rs. 50 per ton less than the price of foundry grade. Though our terms of reference do not require us to recommend the selling prices, we considered the contention of the Foundry Association, as the retention price that we have recommended may have some bearing on the selling price. The Iron and Steel Controller estimates the current demand of pig iron at about 6,00,000 tons and the availability from domestic producers at less than 3,00,000 tons. This indicates an acute shortage of pig iron in the country at present. It, therefore, follows that every possible step should be taken to stimulate the production of pig iron in the country. It is clear that an uneconomic price to the producer of pig iron will not give the necessary incentive to maximise his production. In the present period of acute shortage of pig iron, it is essential to maximise its production in the country.

13. **Summary of conclusions and recommendations.**—Our conclusions and recommendations are summarised as follows:—

(i) The estimated annual production of the Mysore Works is 79,000 tons of pig iron, 33,000 tons of steel ingots and 27,720 tons of steel sections.

[Paragraph 6.1]

(ii) The Mysore Government should examine whether they could reduce the price charged on manganese ore on the supplies made to the Iron and Steel Works so as to reduce the disparity in cost of manganese ore between Mysore Works and other Steel Works.

[Paragraph 7.2.1]

(iii) It is recommended that the Railway Board should be asked to re-examine the possibilities of allowing the Works to use the all rail-route for the transport of coal. If the Railway Board agree to this suggestion, suitable adjustments should be made in the retention prices.

[Paragraph 7.2.4]

(iv) The Mysore Government should examine the possibility of supplying electric power at a special rate to the Iron and Steel Works in order to help them to bring down their costs nearer the level of other producers.

[Paragraph 7.2.5]

(v) Estimates of the average works cost of foundry grade iron produced in the blast furnace comes to Rs. 144·57 per ton, while the cost of foundry grade iron produced in the electric pig iron furnace comes to Rs. 140·09 per ton. The average works cost of steel sections comes to Rs. 322·6 per ton.

[Paragraph 7.1 and 8.1]

(vi) It is recommended that the Works should take steps to obtain refractories at a lower cost and should also examine the possibilities of further reduction in the consumption of refractories.

[Paragraph 8.4].

(vii) As in 1952, return of 7 per cent. on the block has been allowed and it is recommended that the entire surplus left over after payment of interest on fixed capital should be credited to the Reserve Fund.

[Paragraph 9.4]

(viii) The fair ex-works retention price of M.S. billets produced by the Mysore Iron and Steel Works in 1954-55 is Rs. 375 per ton. The fair ex-works retention prices of mild steel sections are Rs. 392 per ton in 1954-55 and Rs. 405 per ton from 1955-56 to 1959-60.

[Paragraph 10.1].

(ix) It is recommended that the Works should maintain separate balance sheets for their different activities and Government should prevail on them to submit the balance sheet for steel for the year 1955-56 before 30th June, 1956.

[Paragraph 10.3]

(x) The fair retention prices of pig iron (standard foundry grade I) are Rs. 178·5 per ton from 14-11-1953 to 31-3-1954, Rs. 197·0 per ton in 1954-55 and Rs. 195·0 per ton from 1955-56 to 1959-60. The prices of other grades are to be determined according to the formula adopted in paragraphs 11·2, 11·3 and 11·4 of the Report.

[Paragraph 11·5]

14. **Acknowledgements.**—We wish to acknowledge the co-operation we have received from Shri T. Shamanna, I.A.S., Director and Vice-Chairman and other representatives of the Mysore Iron and Steel Works in carrying out this inquiry. Our thanks are also due to Shri C. R. Natesan, Iron and Steel Controller and Shri R. N. Dutt, Deputy Iron and Steel Controller who have helped us with much useful information and expert advice.

K. R. DAMLE, *Chairman.*

S. K. MURANJAN, *Member.*

S. K. BOSE, *Secretary.*

Bombay, dated 12th March, **1956.**

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